

CALIFORNIA DEPARTMENT OF TRANSPORTATION

# Journal

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## What's Inside...

A Solid Foundation For the East Span • Soil Nail Technology  
Victorian Streetlights Return to L.A. • Carbon Fiber For Bridges

*Bay Pile Driving Demonstration Project*



Gray Davis,  
Governor

Maria Contreras-Sweet,  
Secretary of the Business,  
Transportation and  
Housing Agency

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Director of the California  
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## A Letter to Readers

I am extremely grateful to the dedicated men and women of our agency for their professional contribution to the safety of California's motorists. The departments within the Business, Transportation and Housing Agency comprise the Governor's principal transportation regulatory and enforcement organizations. By combining their resources, we are making driving safer, as evidenced by the fact that the number of fatalities per miles traveled is now the lowest in the state's history.

As Secretary for Transportation, I am committed to having the best traffic safety programs possible, including anti-DUI, bicycle and pedestrian safety, occupant protection, police traffic services, roadway safety and emergency medical services. These programs and so many others are helping California achieve its traffic safety successes, such as having the highest seat belt compliance rate in the nation.



Maria  
Contreras-Sweet

I have a charge from Governor Gray Davis to improve safety on California's roadways. That means relieving traffic congestion, thus affording people more quality time for work and family life. We all enjoy getting home quickly and safely after a hard day's work.

One of our shared goals is to alleviate traffic congestion by stopping unsafe driving behaviors that contribute to accidents. Through funding for more law enforcement personnel and equip-

ment, emergency response vehicles and public education, we will make our roads even safer. We are also excited about the new partnerships being established with community-based organizations in California. This innovation will expand our outreach enormously. The Governor recently awarded \$11.8 million to local community-based organizations to promote traffic safety programs.

Traffic safety is everyone's business. Governor Davis and I look forward to working with all of you to improve the quality of life for all Californians.

A stylized, handwritten signature in white ink that reads "Maria Contreras-Sweet".

Maria Contreras-Sweet



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by George Hartwell  
Office of State Landscape Architecture  
Photos by Don Tateishi, Herb Holman, George Hartwell

# California

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**On any given day in our state, mountaintops may freeze, rain may lash the coastline, snow can race with a blizzard's fury across a volcano's face, or a boiling sun can superheat desert sands. Within California's diverse habitats lies a mantle of vegetation — a spectrum of natural diversity, manifest in every imaginable size, shape, texture, form and color, shifting constantly. Most of the time the change is imperceptible and associated with plant life's complex, interactive relationship with everything else around it, below it and above it.**

**For California travelers, it's a slow-motion picture of grace, beauty, form and function. Sometimes, however, the change may be overwhelmingly fast and irreversible, the result of human impact on the landscape.**



# WILD

## *Wildflowers in Landscape Design*

California's *Changing Landscapes*, by Michael Barbour, Bruce Pavlik, Susan Lindstrom and Frank Drysdale, is a contemporary work that speaks to the issue of rapid environmental change:

"Vegetation is the plant cover of a region, the clothing over the land. This thin cloth is at once durable and fragile, able to repair and reproduce itself for centuries if the environment remains stable, but subject to irreversible unraveling when environmental stresses become too severe. When vegetation is disrupted, its integrity is fractured. The degraded cover loses ecological relationships and diversity - both plant and animal."



CaliforniaWILD (California Wildflowers in Landscape Design) is a Caltrans program that seeks to identify, protect and enhance roadside remnant native plant communities. These natural resources are important for their environmental, aesthetic, scientific, cultural and educational values. Some are rare. And although native wildflowers - often displayed in wildly colorful seasonal displays along roadsides - are the showy elements of the CaliforniaWILD program, they are just one part of a natural association that can include grasses, herbs, woody shrubs, trees, mosses, lichens, ferns and more.





**Transportation system development affects Nature's delicate balance, making Caltrans' job as steward of natural roadside resources critically important. This role is not unfamiliar. Caltrans works diligently to avoid adverse environmental impacts and, where that is unfeasible, mitigates them.**



The components of a healthy native plant community fit together in unique balance, whether on or off the roadside. CaliforniaWILD has identified 20 “botanical management areas” (or roadside reserves) that represent California’s diverse plant communities. The program’s objective is to preserve natural biodiversity in roadside environments, combat invasive weeds that threaten them and discourage human activity that is inconsistent with habitat conservation.

Many of California’s roadsides provide places where natural landscapes can be protected and restored. In some instances, they represent the last physical links that join fragmented vegetation communities. These “DNA super-highways” enable the unimpeded flow of plant and animal genetic continuity from one place to another.

The value of native vegetation was underscored profoundly by Rachel Carson in her 1962 book, “Silent Spring”:

“The earth’s vegetation is part of a web of life in which there are intimate and essential relationships between

plants and the earth, between plants and other plants, between plants and animals. Sometimes we have no choice but to disturb these relationships, but we should do so thoughtfully, with full awareness that what we do may have consequences remote in time and place.”

California’s patterns of vegetation have changed dramatically since European settlers first came to California. Changes in land use increased in frequency and intensity as population increased, cities emerged, agriculture converted native grasslands to non-native species, and highways were built to link farm and market, town and city.

The introduction of non-native, invasive species—either intentional or inadvertent—wrought catastrophic environmental change to much of California’s natural landscape. Perhaps nowhere is this so apparent as on roadsides. And that’s what travelers see most often, up close and personal. Noxious weeds that exist in natural balance in their place of origin, without environmental factors that keep them in check at home, have invaded roadside natural areas with a vengeance and have displaced native





vegetation, sometimes completely. The environmental and economic costs of these noxious weed invasions are immeasurable. Still, many California roadsides, even grossly degraded ones, represent a repository of the natural landscape and offer the potential for restoration.

The Federal Highway Administration, implementing national policy, law and executive order, has assisted states, including California, in developing “environmentally beneficial” landscape practices that require the use of native plant materials whenever possible. Other guidelines prescribe cooperation in the nationally driven effort to eradicate invasive weed species from state highway roadsides.



A renaissance of awareness of the need to protect California’s natural heritage, restore what we can and control invasive weed species has changed in great part the culture of Caltrans and the way we think of roadsides.

In the 1930s, the national concept that “America’s roadsides are America’s front lawns” produced a manicured, irrigated roadside landscape comprised mostly of non-native plant species.

Formal, irrigated, non-native landscapes still play an important role in providing a pleasant interface between transportation infrastructure and communities in urbanized California. Rural and suburban roadsides, however, may be viewed much differently. In these special places, programs like CaliforniaWILD and others can help maintain and restore natural wildflower meadows, native grasslands, chaparral scrubs, mountain forests, desert habitats and other remnants of California’s great ecological diversity.

And if, in doing so, our roadsides present travelers with a great splash of natural color, so much the better.





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